

Title (en)  
ANTI-TRACKING SPEAR-POINTS FOR EARTH-BORING DRILL BITS

Title (de)  
KRIECHSTROMFESTE SPEERSPITZEN FÜR ERDBOHRMEISSEL

Title (fr)  
POINTES EN ÉTOILE ANTI-RETOMBÉES POUR TRÉPANS DE FORAGE

Publication  
**EP 2462305 A2 20120613 (EN)**

Application  
**EP 10744789 A 20100806**

Priority

- US 23213309 P 20090807
- US 2010044754 W 20100806

Abstract (en)  
[origin: US2011031021A1] Described herein are roller cone drill bits and modified roller cones for use in drilling subterranean earth formations, and more specifically roller cone drill bits and roller cones having optimized spear point designs and blade orientations on at least one of the roller cones for reduced tracking and/or increased drilling performance during bit use. The roller cone drill bits include a bit body with a longitudinal axis, one or more bit legs depending from the body, and at least one roller cone attached to each of the bit legs and able to rotate with respect to the bit body, wherein at least one of the roller cones includes a spear point at the cone apex having two or more cutting blades, the cutting blades being oriented at a variety of non-equal, asymmetric angles about a central cone axis with respect to each other, such that tracking during drilling using the drill bit is minimized or eliminated.

IPC 8 full level  
**E21B 10/16** (2006.01)

CPC (source: EP US)  
**E21B 10/16** (2013.01 - EP US)

Citation (search report)  
See references of WO 2011017642A2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**US 2011031021 A1 20110210; US 8579051 B2 20131112**; CA 2770500 A1 20110210; CA 2770500 C 20141007; EP 2462305 A2 20120613; WO 2011017642 A2 20110210; WO 2011017642 A3 20110512; WO 2011017642 A4 20110728

DOCDB simple family (application)  
**US 85216510 A 20100806**; CA 2770500 A 20100806; EP 10744789 A 20100806; US 2010044754 W 20100806